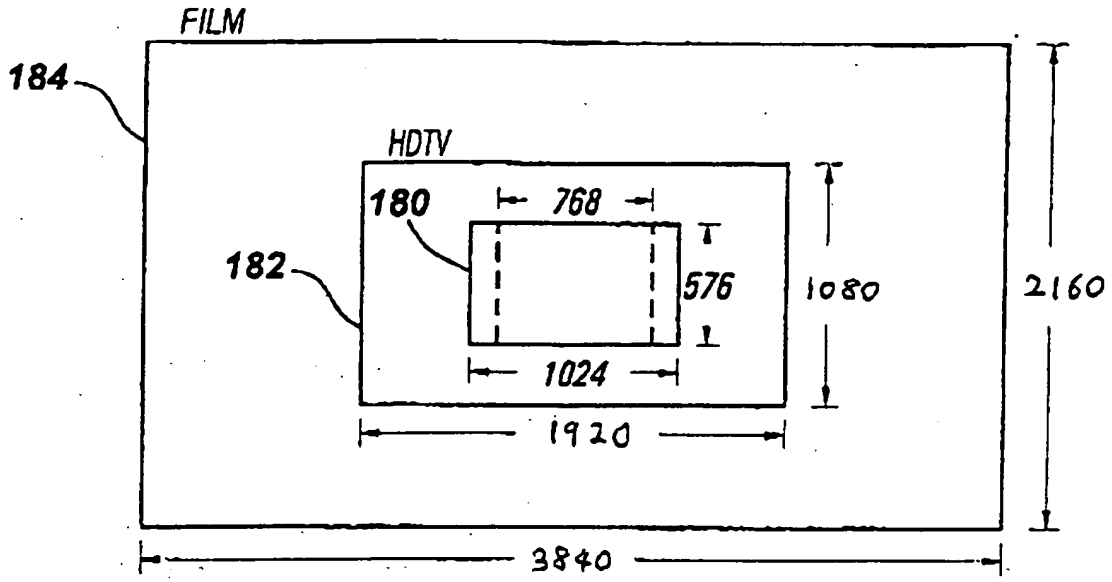


Figure 1a

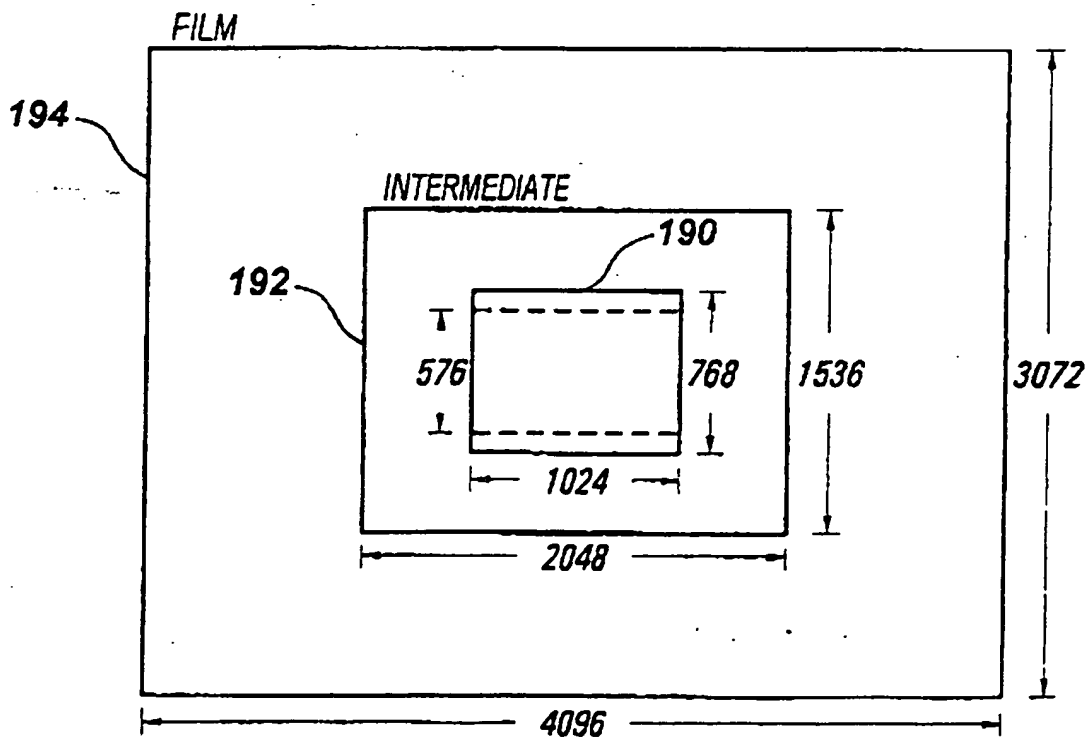


Figure 1b

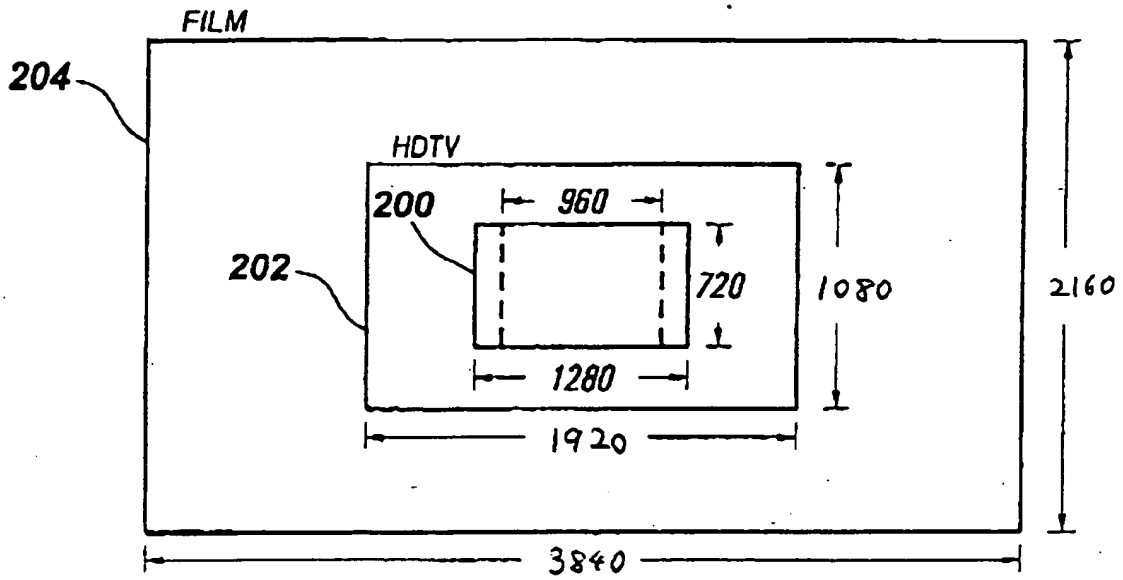


Figure 1c

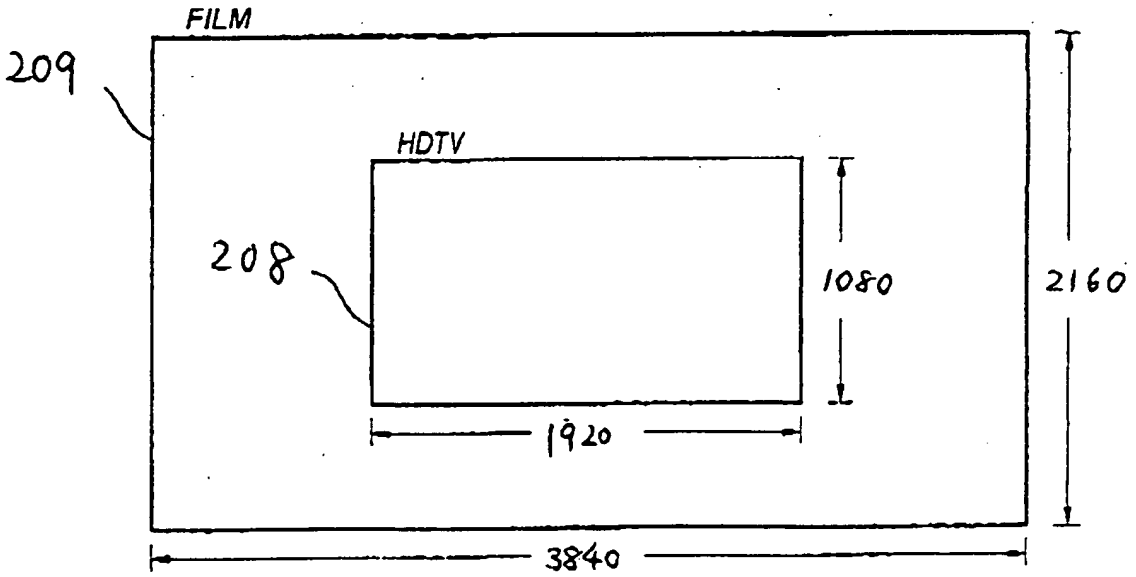


Figure 1d

09605605 - 052104

FOIP290 5998860

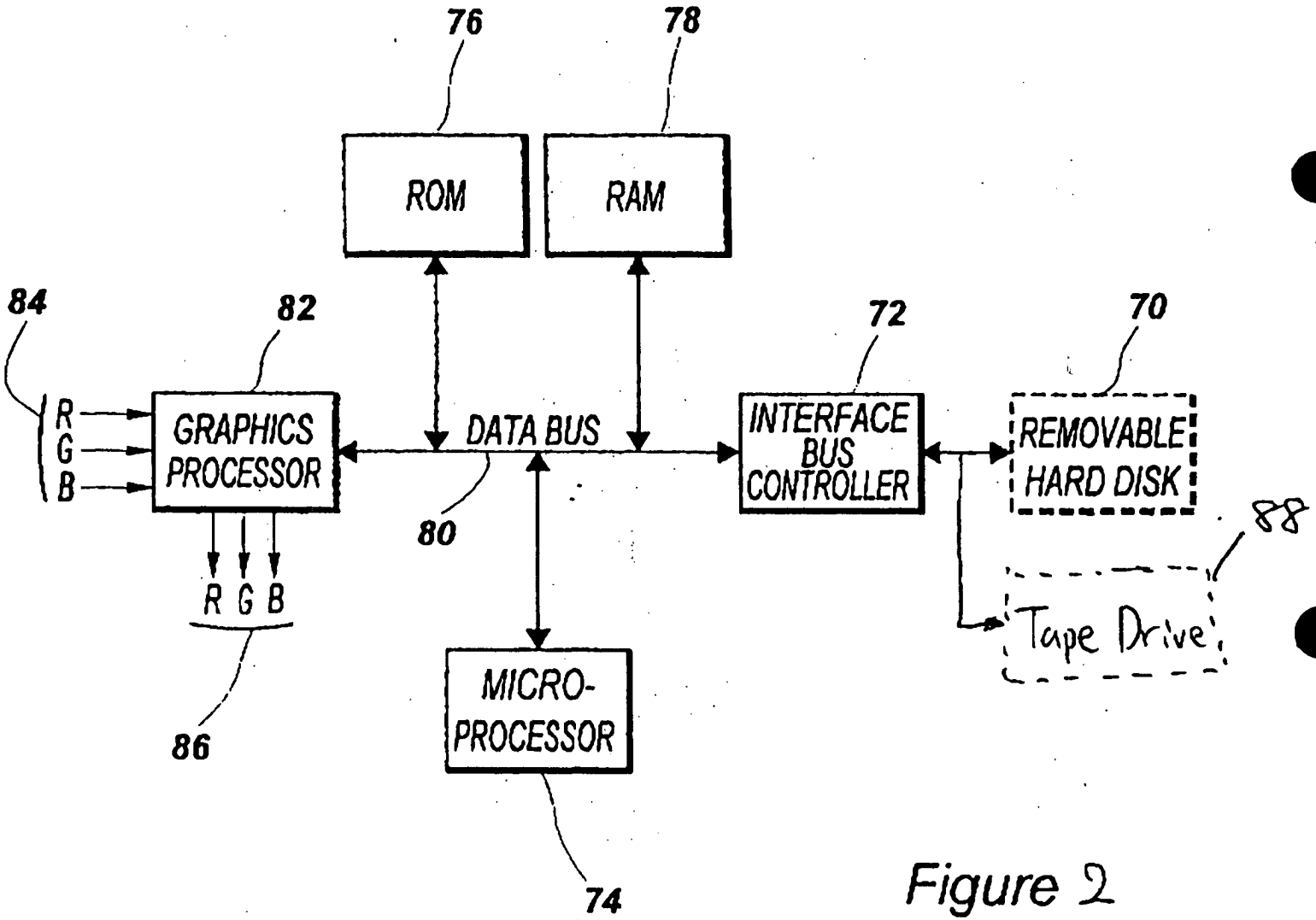


Figure 2

Figure 3

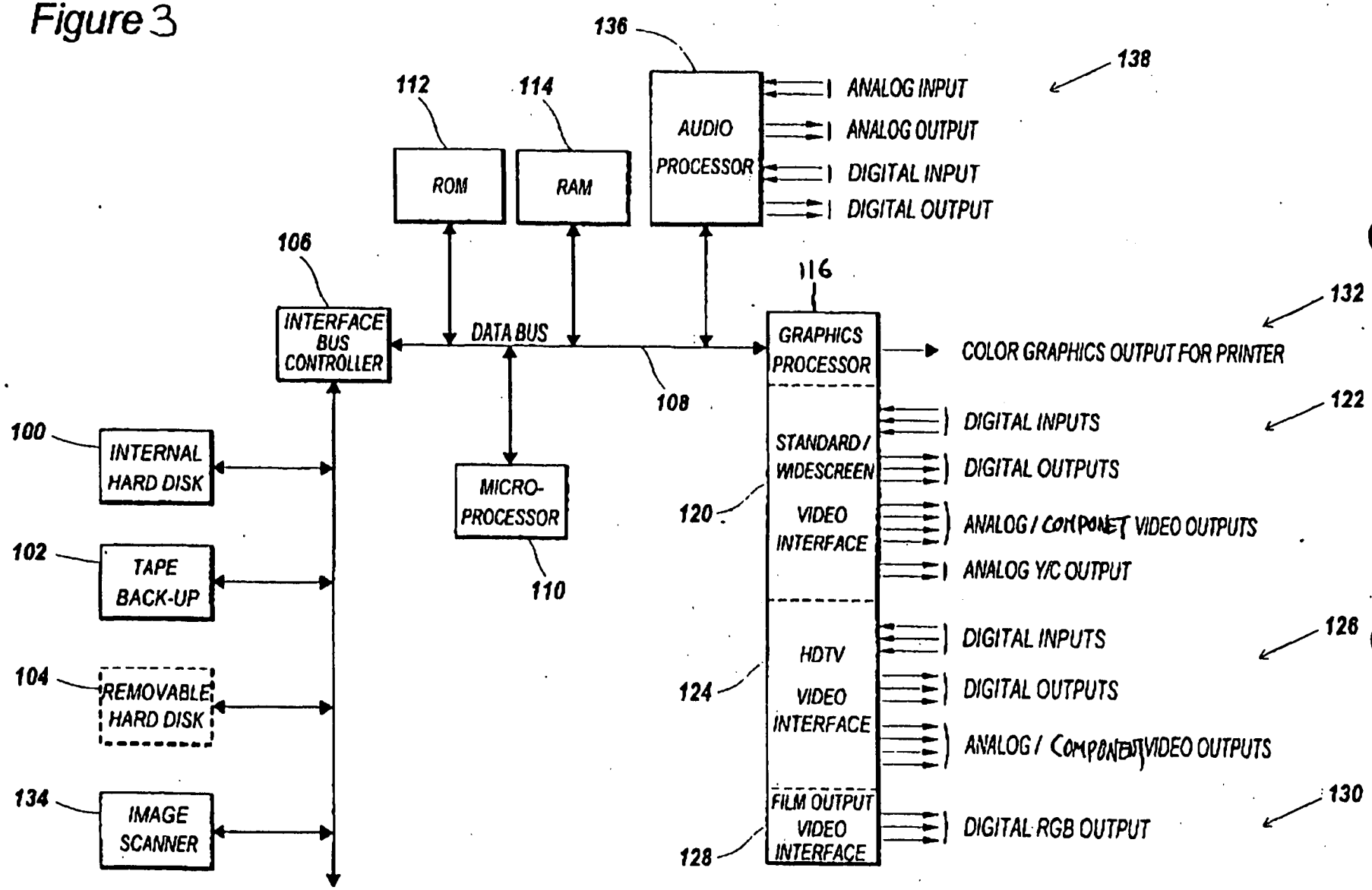
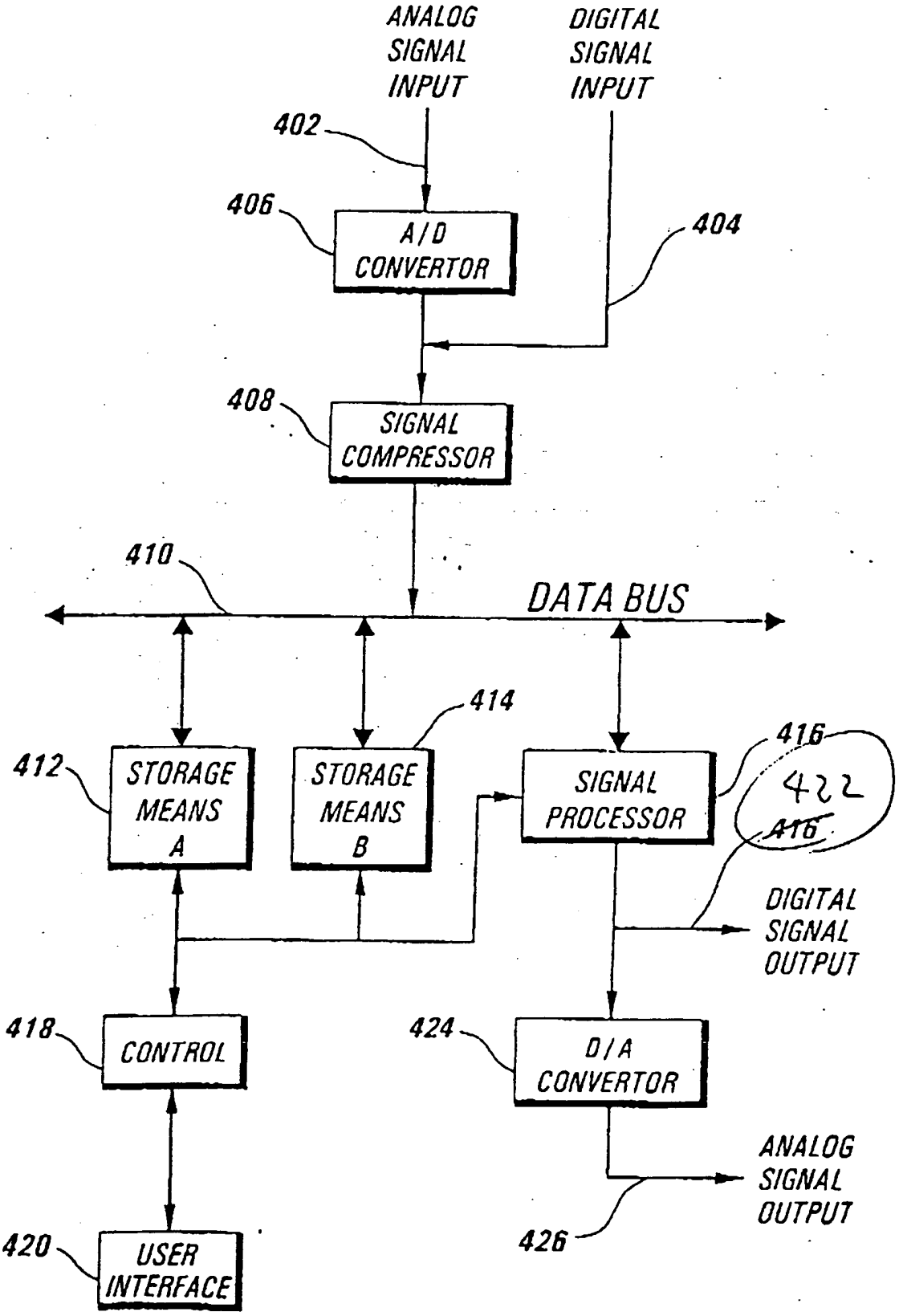

136
138
112
114
ROM
RAM
AUDIO PROCESSOR
ANALOG INPUT
ANALOG OUTPUT
DIGITAL INPUT
DIGITAL OUTPUT
106
116
INTERFACE BUS CONTROLLER
DATA BUS
GRAPHICS PROCESSOR
132
COLOR GRAPHICS OUTPUT FOR PRINTER
108
122
DIGITAL INPUTS
STANDARD / WIDESCREEN
DIGITAL OUTPUTS
120
VIDEO INTERFACE
ANALOG / COMPONENT VIDEO OUTPUTS
ANALOG Y/C OUTPUT
100
INTERNAL HARD DISK
MICRO-PROCESSOR
110
102
TAPE BACK-UP
126
DIGITAL INPUTS
HDTV
124
VIDEO INTERFACE
DIGITAL OUTPUTS
ANALOG / COMPONENT VIDEO OUTPUTS
104
REMOVABLE HARD DISK
134
IMAGE SCANNER
130
FILM OUTPUT VIDEO INTERFACE
DIGITAL RGB OUTPUT
128

Figure 4


ANALOG SIGNAL INPUT
DIGITAL SIGNAL INPUT
402
406
A/D CONVERTOR
404
408
SIGNAL COMPRESSOR
410
DATA BUS
414
412
STORAGE MEANS A
STORAGE MEANS B
416
SIGNAL PROCESSOR
422
416
DIGITAL SIGNAL OUTPUT
418
CONTROL
424
D/A CONVERTOR
ANALOG SIGNAL OUTPUT
426
420
USER INTERFACE

TOP290 "5899888O

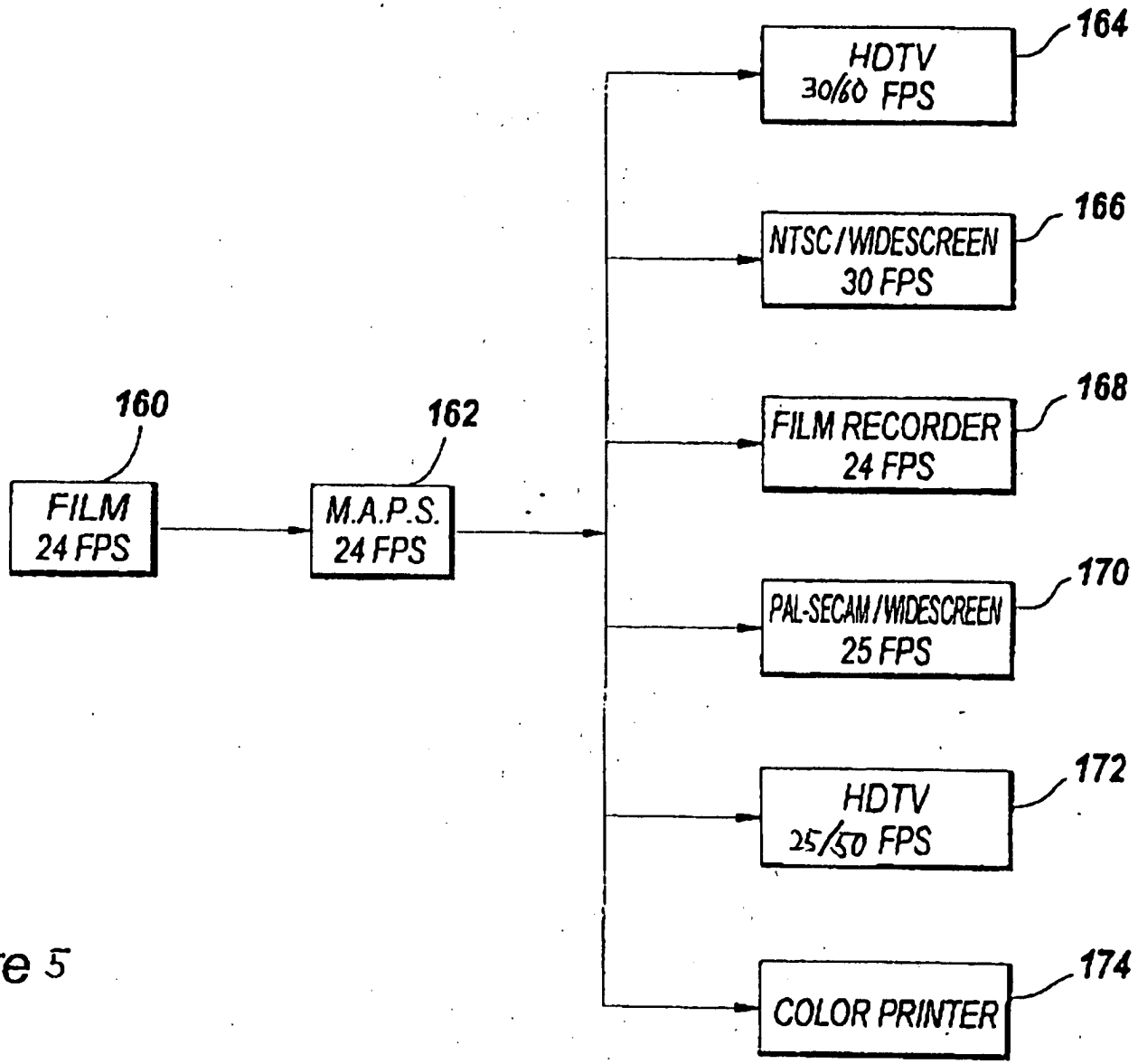


Figure 5

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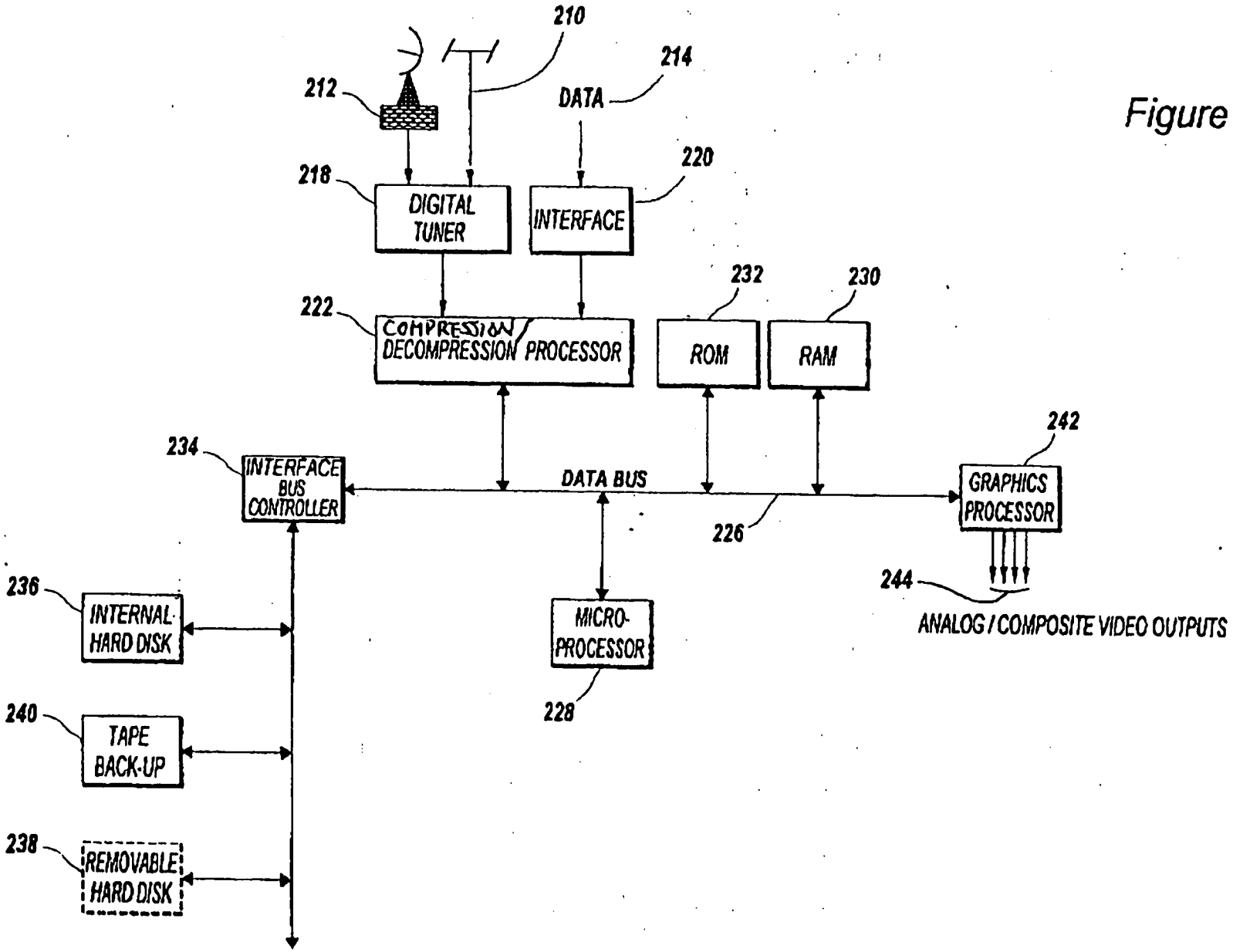


Figure 6

Figure 7a

Output Source	24 fps Interlace (24fps I)	24fps Progress. (24fps P)	25fps Interlace (25fps I)	25fps Progress. (25fps P)	30fps Interlace (30fps I)	30fps Progress. (30fps P)	48fps Progress. (48fps P)	50fps Progress. (50fps P)	60fps Progress. (60fps P)	96fps Progress. (96fpsP)
24fps Interlace (24fps I)	———	2:1 Frame Reduction From 48fps P (2)	Speed-up From 24fps I (1)	2:1 Frame Reduction From 50fps P (3)	Interlace & discard From 60fps P (3)	2:1 Frame Reduction From 60fps P (3)	De-Interlace From 24fps I (1)	De-Interlace From 25fps I (2)	4th Frame Repeat From 48fps P (2)	Repeat From 48fps P (2)
24fps Progress. (24fps P)	Interlace From 24fps P (1)	———	Speed-up From 24fps I (2)	Speed-up From 24fps P (1)	3:2 Pull-down From 24fps I (2)	2:1 Frame Reduction From 60fps P (2)	Repeat From 24fps P (1)	Repeat From 25fps P (2)	3:2 Frame Repeat From 24fps P (2)	Repeat From 48fps P (2)
25fps Interlace (25fps I)	Slow-Down From 25fps I (1)	2:1 Frame Reduction From 48fps P (3)	———	2:1 Frame Reduction From 50fps P (2)	Interlace & discard From 60fps P (4)	2:1 Frame Reduction From 60fps P (4)	De-Interlace From 24fps I (2)	De-Interlace From 25fps I (1)	4th Frame Repeat From 48fps P (3)	Repeat From 48fps P (3)
25fps Progress. (25fps P)	Interlace From 24fps P (2)	Slow-down From 25fps P (1)	Interlace From 25fps P (1)	———	3:2 Pull-down From 24fps I (3)	2:1 Frame Reduction From 60fps P (4)	De-Interlace From 24fps I (3)	Repeat From 25fps P (1)	3:2 Frame Repeat From 24fps P (2)	Repeat From 48fps P (3)
30fps Interlace (30fps I)	5th Fr. red., Interlace & Disc. Frm. 60fps P (2)	2:1 Frame Reduction From 48fps P (3)	6th Fr. red. Interlace & Disc. Frm. 60fps P (2)	2:1 Frame Reduction From 50fps P (3)	———	2:1 Frame Reduction From 60fps P (2)	De-Interlace From 24fps I (3)	De-Interlace From 25fps I (3)	De-Interlace From 30fps I (1)	Repeat From 48fps P (3)
30fps Progress. (30fps P)	5th Fr. red., Interlace & Disc. Frm. 60fps P (2)	2:1 Frame Reduction From 48fps P (4)	6th Fr. red. Interlace & Disc. Frm. 60fps P (2)	2:1 Frame Reduction From 50fps P (4)	Interlace From 30fps P (1)	———	De-Interlace From 24fps I (3)	De-Interlace From 25fps I (3)	Repeat From 30fps P (1)	Repeat From 48fps P (4)
48fps Progress. (48fps P)	Interlace From 24fps P (2)	2:1 Frame Reduction From 48fps P (1)	Interlace From 25fps P (3)	Speed-up From 24fps P (2)	3:2 Pull-down From 24fps I (3)	2:1 Frame Reduction From 60fps P (2)	———	De-Interlace From 25fps I (4)	De-Interlace From 30fps I (4)	Repeat From 48fps P (1)
50fps Progress. (50fps P)	Interlace From 24fps P (3)	Slow-down From 25fps P (2)	Interlace & discard From 50fps P (1)	2:1 Fame Reduction From 50fps P (1)	3:2 Pull-down From 24fps I (3)	2:1 Frame Reduction From 60fps P (3)	De-Interlace From 24fps I (4)	———	3:2 Frame Repeat From 24fps P (3)	Repeat From 48fps P (2)
60fps Progress. (60fps P)	5th Fr. red., Interlace & Disc. Frm. 60fps P (1)	2:1 Frame Reduction From 48fps P (4)	6th Fr. red. Interlace & Disc. Frm. 60fps P (1)	2:1 Frame Reduction From 50fps P (4)	Interlace & discard From 60fps P (1)	2:1 Frame Reduction From 60fps P (1)	De-Interlace From 24fps I (3)	De-Interlace From 25fps I (2)	———	Repeat From 48fps P (4)
96fps Progress. (96fps P)	Interlace From 24fps P (3)	2:1 Frame Reduction From 48fps P (2)	Speed-up From 24fps I (4)	Speed-up From 24fps P (3)	3:2 Pull-Down From 24fps I (4)	2:1 Frame Reduction From 60fps P (3)	2:1 Frame Reduction From 96fps P (1)	De-Interlace From 25fps I (5)	4th Frame Repeat From 48fps P (2)	———

Figure 7b

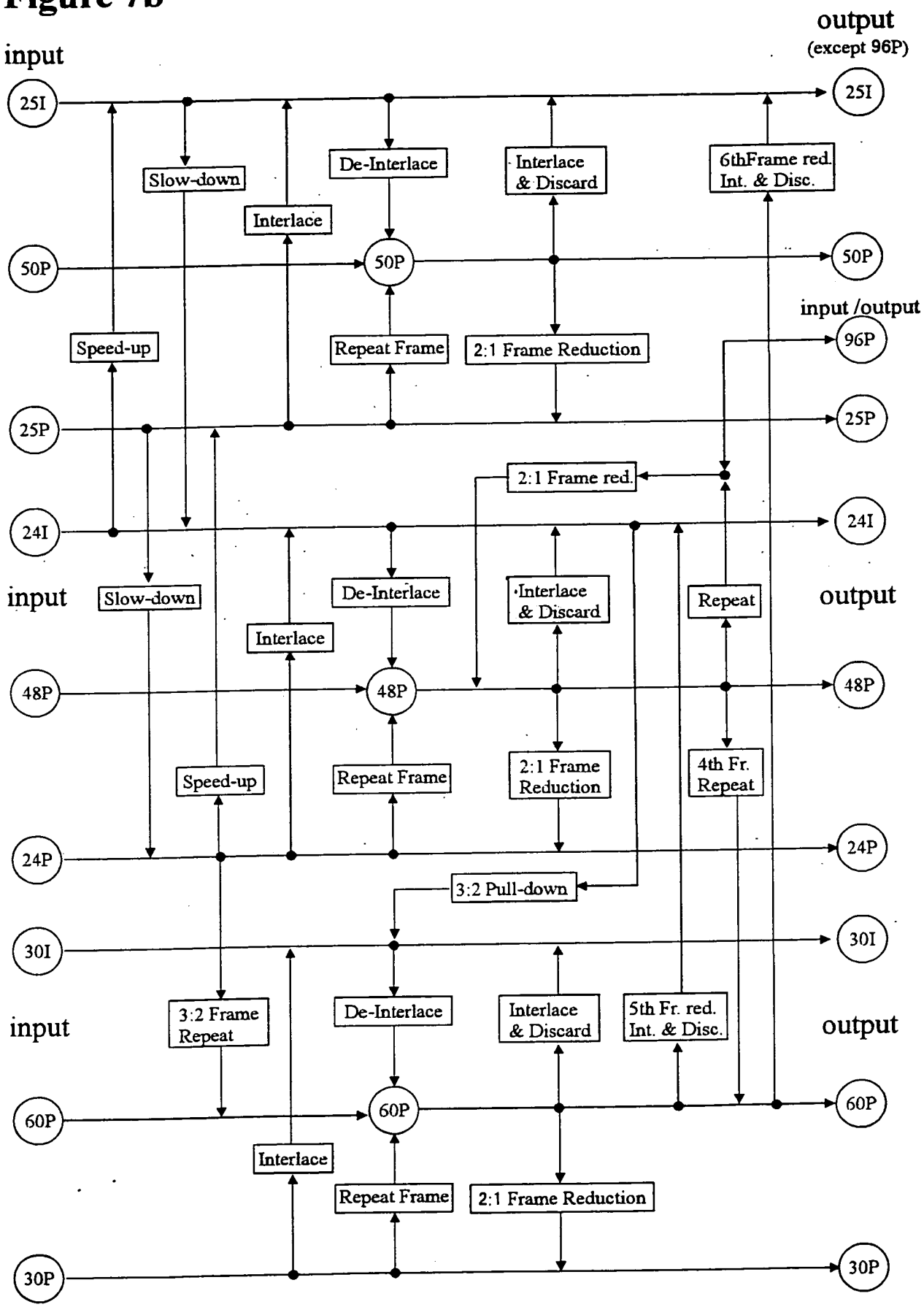

output
(except 96P)
input
25I
25I
Slow-down
De-Interlace
Interlace & Discard
6thFrame red. Int. & Disc.
Interlace
50P
50P
50P
input /output
Speed-up
Repeat Frame
2:1 Frame Reduction
96P
25P
25P
2:1 Frame red.
24I
24I
input
Slow-down
De-Interlace
Interlace & Discard
Repeat
output
Interlace
48P
48P
48P
Speed-up
Repeat Frame
2:1 Frame Reduction
4th Fr. Repeat
24P
24P
3:2 Pull-down
30I
30I
input
3:2 Frame Repeat
De-Interlace
Interlace & Discard
5th Fr. red. Int. & Disc.
output
60P
60P
60P
Interlace
Repeat Frame
2:1 Frame Reduction
30P
30P

Figure 7c 3 : 2 Pull-Down
(24 fps P to 30 fps I)

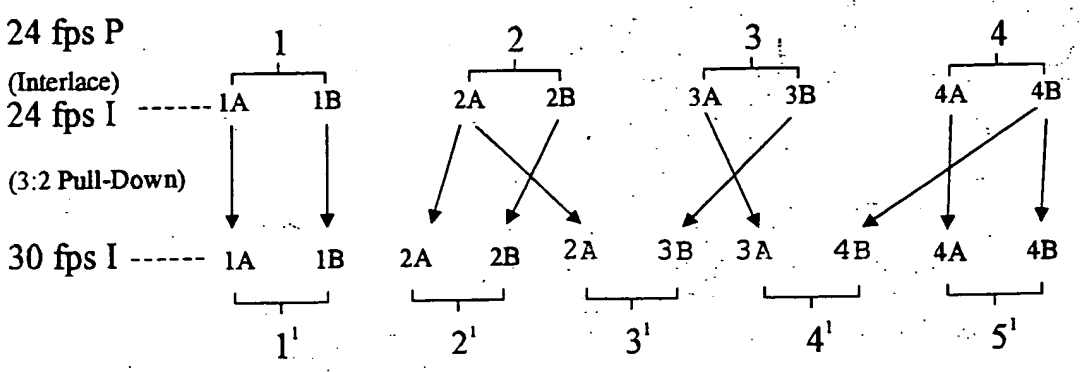
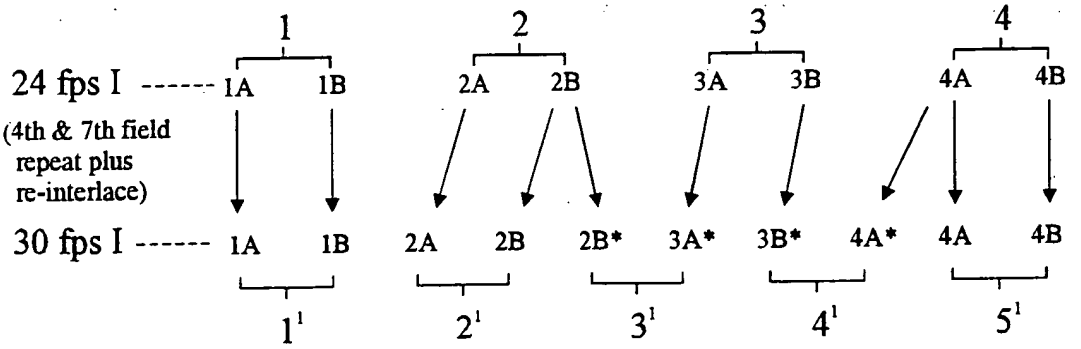


Figure 7e 4th & 7th Field Repeat plus Re-Interlace
(24 fps I to 30 fps I)



* Revresed- Field

Figure 7g 3 : 2 Frame Repeat (24 fps P to 60fps P)

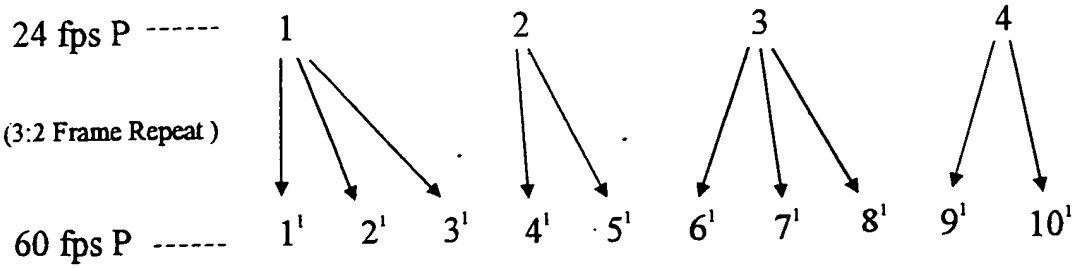


Figure 7d

25 fps Interlace to 30 fps Interlace Conversion
(from PAL CCD camera source to NTSC out)

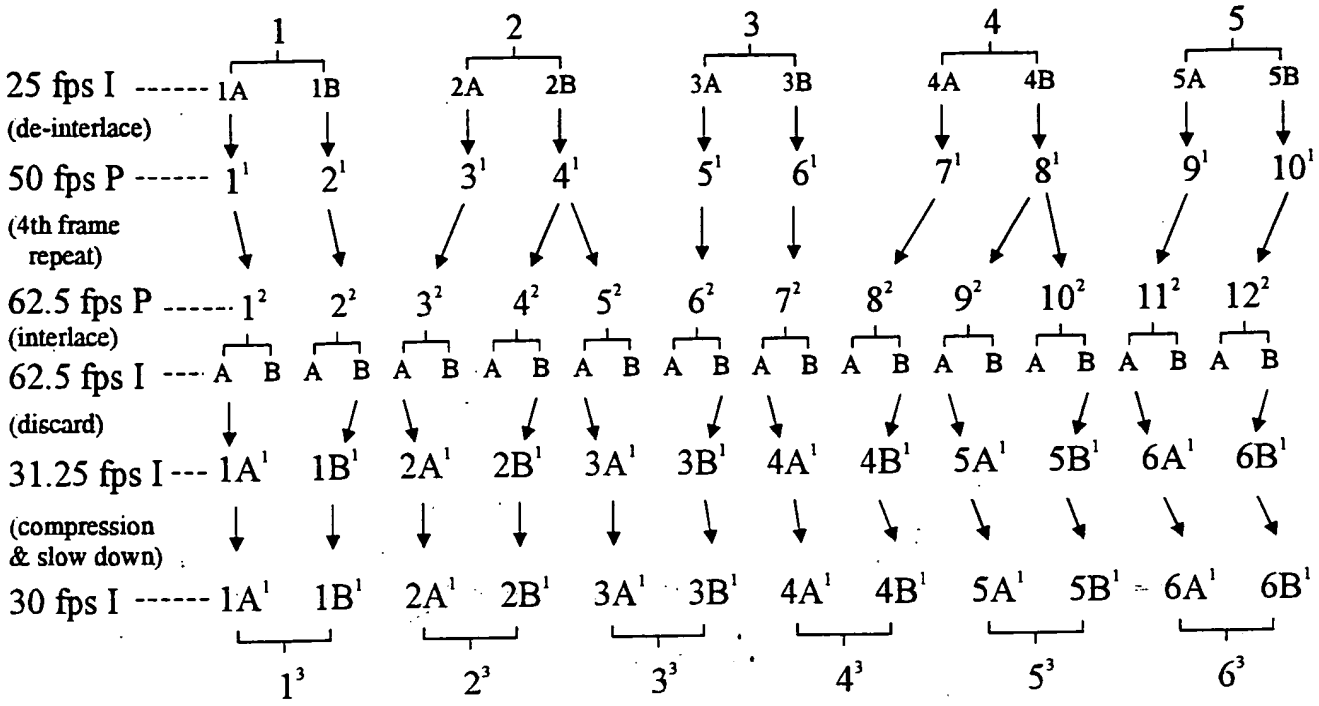


Figure 7f

4th Frame Repeat (24fps I to 30fps I)

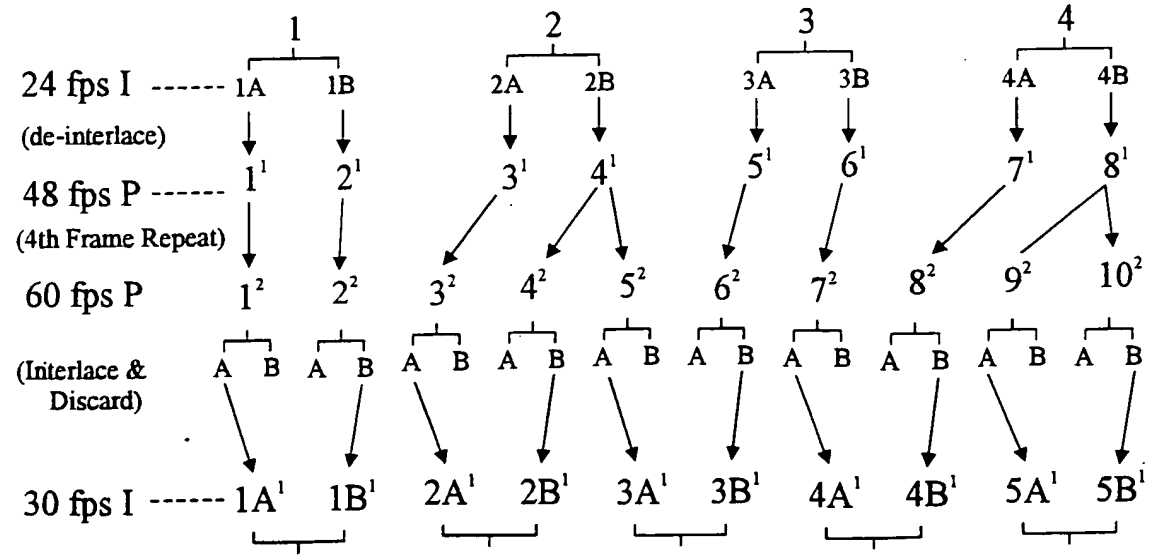


Figure 7h 6th Frame Reduction (30fps I to 25fps I)

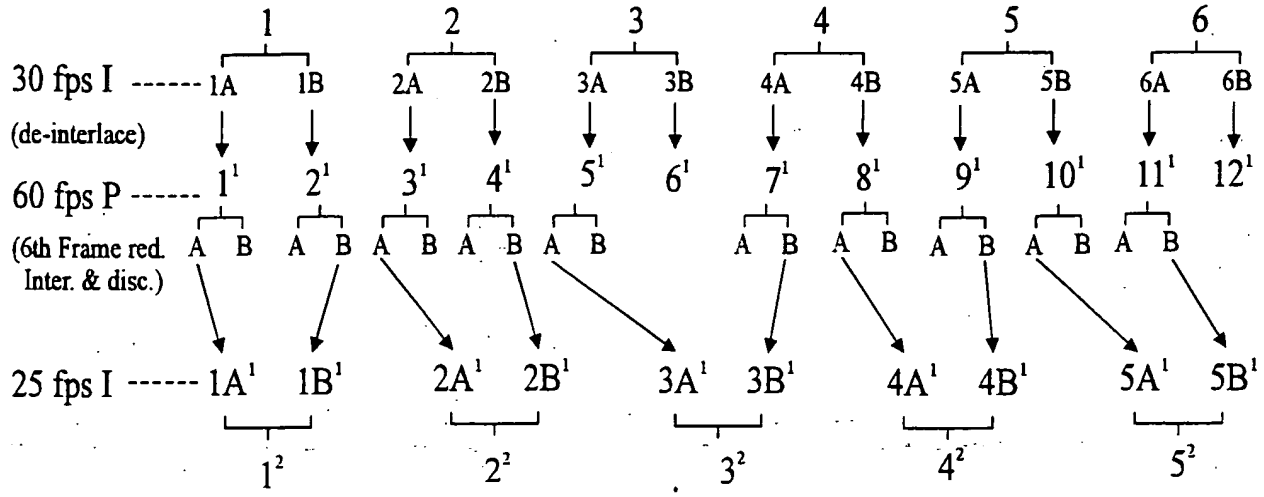


Figure 7i 5th Frame Reduction (30fps I to 24fps I)

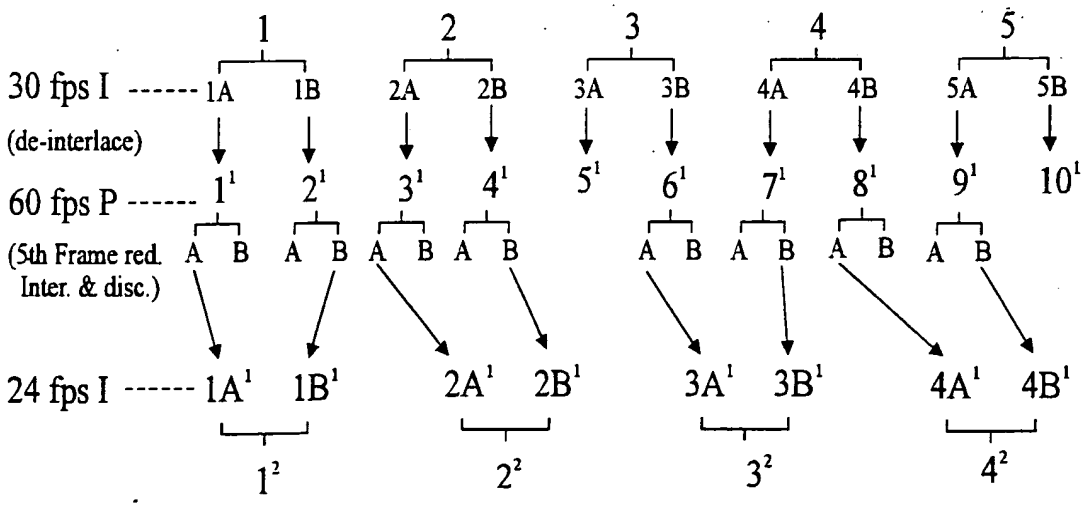


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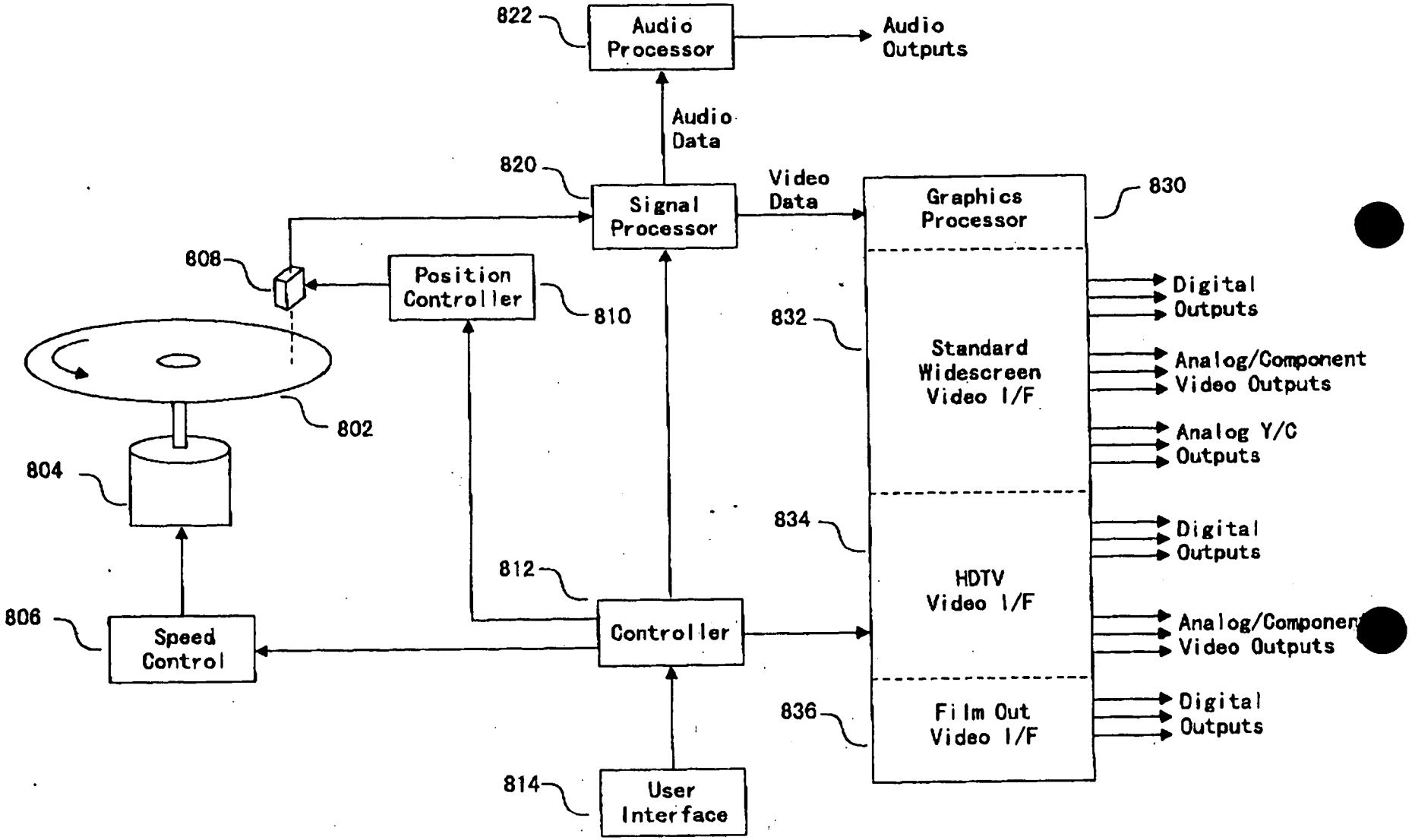
Fig. 8



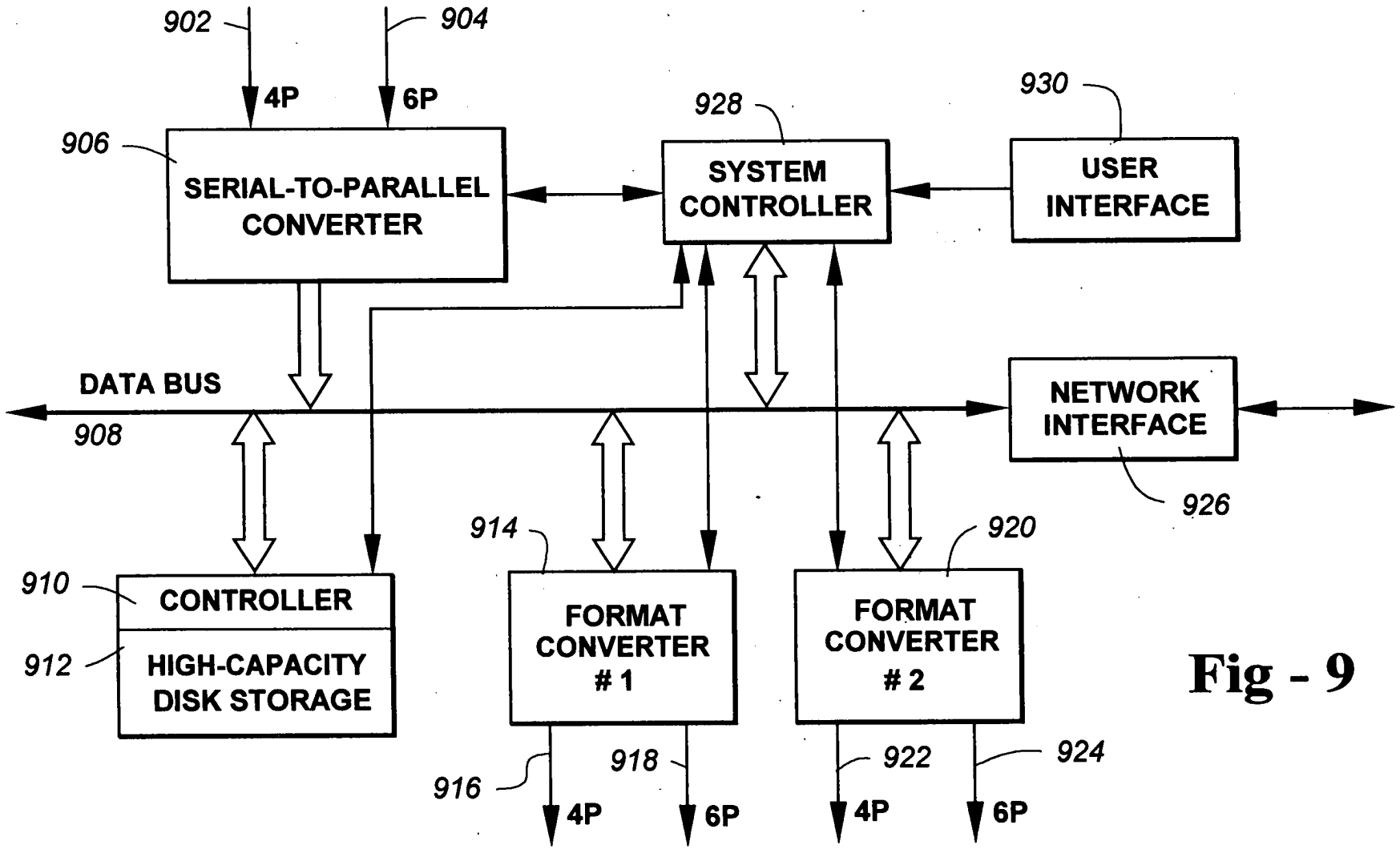

902
904
4P
6P
906
SERIAL-TO-PARALLEL CONVERTER
928
SYSTEM CONTROLLER
930
USER INTERFACE
DATA BUS
908
NETWORK INTERFACE
926
914
920
910
CONTROLLER
912
HIGH-CAPACITY DISK STORAGE
FORMAT CONVERTER # 1
FORMAT CONVERTER # 2
916
918
922
924
4P
6P
4P
6P

Fig - 9

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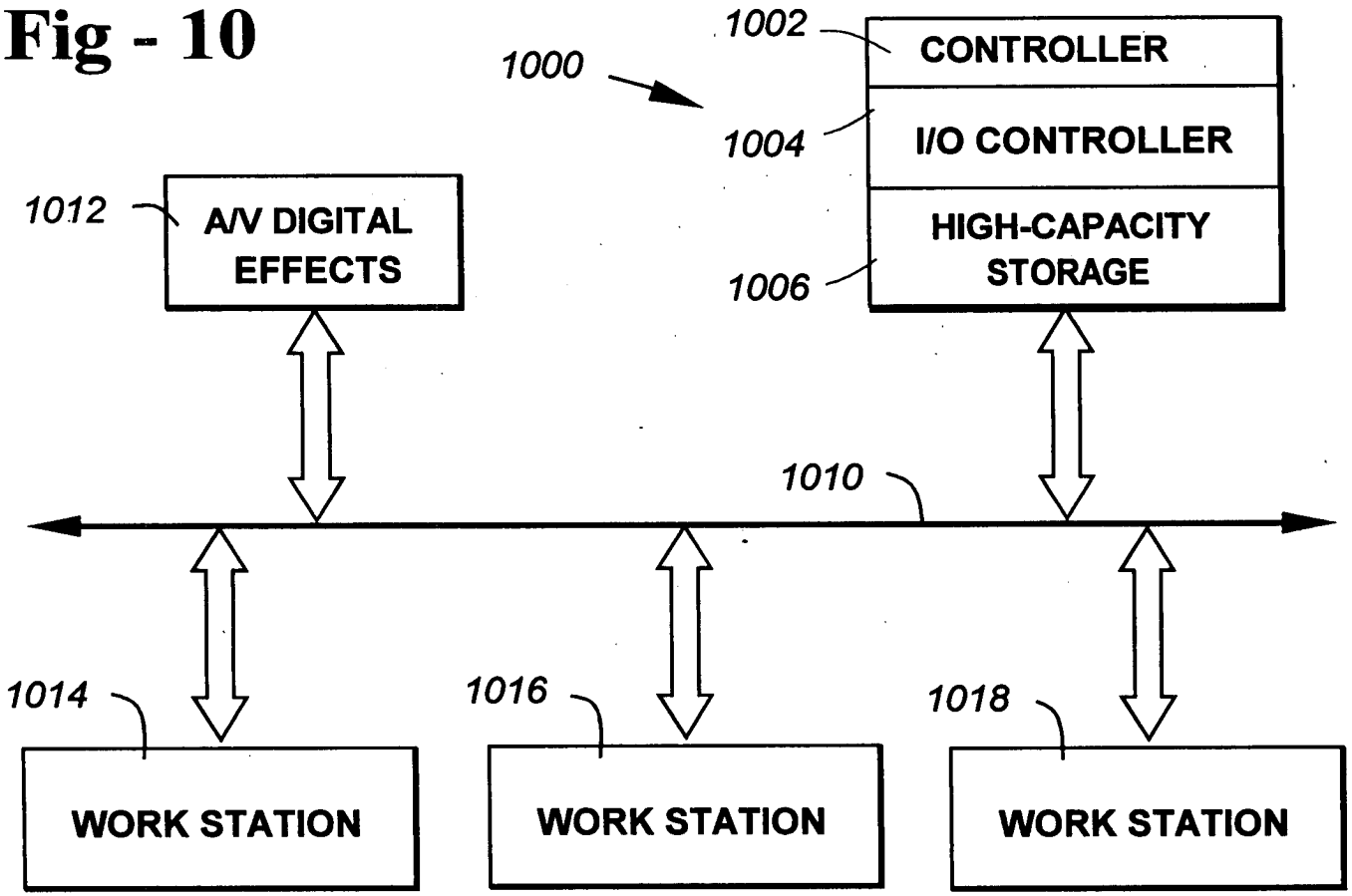
Fig - 10